

# **IOWA HIGHWAY RESEARCH BOARD (IHRB)**

*Minutes of December 8, 2016*

## **Regular Board Members Present**

A. Abu-Hawash  
K. Jones  
T. Nicholson  
S. Okerlund  
T. Wipf  
D. Miller  
L. Roehl  
M. Kennerly

W. Weiss  
S. Rinehart  
K. Mayberry  
M. Parizek  
J. Thorius

## **Alternate Board Members Present**

B. Braun  
C. Poole

## **Members with No Representation**

## **Secretary – V. Goetz**

## **Visitors**

Tammy Bailey  
Bob Younie  
Chris Brakke  
Tom Cackler  
Brian Keierleber  
Danny Waid  
Kasthurirangan Gopalakrishnan  
Darla Hugaboom

Iowa Department of Transportation  
Iowa Department of Transportation  
Iowa Department of Transportation  
WCI  
Buchanan County  
Iowa County Engineers Association  
Iowa State University  
Federal Highway Administration

The meeting was held at the Iowa Department of Transportation Ames Complex, Materials East/West Conference Room, on Thursday, December 8, 2106. The meeting was called to order at 1:00 p.m. by Chairperson Sarah Okerlund with an initial number of 13 voting members/alternates at the table.

### **1. Agenda review/modification**

Vanessa presented Mike Kennerly with a certificate for serving on the Iowa Highway Research Board. Danny presented Doug Miller and Larry Roehl certificates for serving on the Iowa Highway Research Board.

### **2. Motion to approve Minutes from the October 28, 2016 meeting**

**Motion to Approve** by K. Jones; 2<sup>nd</sup> A. Abu-Hawash  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

- 3. Final Report: TR-697, “Prevention and Restoration of Early Joint Deterioration”, Steve Tritsch, Iowa State University (\$74,551)**

## **BACKGROUND**

For more than a century, portland cement concrete pavements have served the traveling public well. During this time, joint design has undergone many changes in regard to spacing, width, depth, and formation, and materials engineers have gained knowledge about the concrete mixture itself related to improving joint performance. In recent years, however, premature concrete pavement joint distresses have occurred, primarily affecting the mortar in the joints. This premature deterioration has been observed not only in Iowa but in other snowbelt states as well.

## **OBJECTIVES**

The primary goal of the guide is to summarize recent research findings in order to help Iowa’s concrete pavement engineers understand the causes of premature joint deterioration and the strategies that can help prevent or limit such deterioration. Secondary goals are to summarize best practices for joint maintenance, repair, and restoration. Note that, although the focus of the guide is on joints, the information is relevant for designing, constructing, and maintaining durable concrete pavements in general. Chapter 1 provides a brief history of concrete pavement joint performance in Iowa. Chapter 2 discusses the mechanisms of premature joint deterioration, citing several salient research efforts. Chapters 3 through 5 focus on designing, constructing, maintaining, and repairing durable joints. Chapter 6 offers guidelines for developing project specifications, with appropriate links to Iowa Department of Transportation Standard Road Plans, Standard Specifications, and Instructional Memoranda. The remaining sections of this tech brief summarize the causes and solutions related to early joint distress.

**Motion to Approve by K. Jones; 2<sup>nd</sup> K. Mayberry**  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

## **4. STIC Project Ranking**

1. In Situ Modulus Measurement Using Automated Plate Load Testing (APLT) for Statewide MEPD Implementation
2. GRS Abutment Design for Short Span Box Beam Standards

The State Wide Transportation Innovation Council (STIC) will periodically review proposals recommend for the STIC incentive. The STIC incentive funds are \$100,000 dollars that are made available to the STIC’s from Federal Highway on a Federal fiscal year bases. GRS Abutment Design for Short Span Box Beam Standards is eligible to be funded as a continuation phase proposal. The IHRB selected “In Situ Modulus Measurement Using Automated Plate Load Testing (APLT) for Statewide MEPD Implementation” to be developed into a STIC proposal to be submitted to IA FHWA for review and approval. State research funds are set aside each year to provide the required \$25,000 State match.

**Motion to Approve by A. Abu-Hawash; 2<sup>nd</sup> W. Weiss**  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

## 5. AID Project Ranking

Vanessa stated the Advance Deployment Demonstration grant is available from FHWA to the State. There is up to a million dollars for a project, up to two projects per State in a Fiscal year. One million dollars benefits the State agency and the other million dollars could be for sub recipients of the State such as County and MPO's.

Only one submittal was received to benefit sub-recipients:

- Implementation of Iowa Box Beam Bridge Standards Using UHPC Joints (County):  
The AID funds are 80 percent Federal share. The request also includes IHRB funding the \$250 thousand dollars match for this project.

Three submittals were received for the State DOT:

- Use of Unmanned Aerial Vehicles (UAVs) for Infrastructure Health Monitoring and Management
- Pavement Foundation Design Modulus Verification for Construction Quality Monitoring
- US 52 Bridge over Mississippi River Overflow in Sabula

The IHRB approved advancing the Iowa Box Beam Implementation project and Pavement Foundations Design Modulus Verification for QC Monitoring. It also requests that further discussion happen within the DOT and Counties on advancing the use of UAV's for transportation applications and for possible consideration for future AID grants

Motion to Approve by A. Abu-Hawash; 2nd D. Miller  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

## 6. City Outreach

Vanessa sent out an e-mail asking Board Members for thoughts on funding City representatives on the Iowa Research Board to attend TRB Annual Meeting in January in DC, similar to the funding provided to County representatives.

Motion to Approve by A. Abu-Hawash, 2<sup>nd</sup> P. Assman  
Motion carried with 10 Aye, 0 Nay, 0 Abstaining.

*\*The discussion, motion, and votes were previously done via e-mail with 10 regular members participating in the discussion. It allowed registration to TRB prior to the early bird discount deadline\**

One goal for this year is to better the relationship with our City representatives on the Board. One effort that was started 7 years ago is the County Research group and has been a great way to disseminate research ideas and also to get the county engineers together to talk about their needs and develop a prioritized research agenda.

Vanessa proposes that IHRB sponsor and assist with starting a City representatives focus group and make the same discussions. Keith Knapp at LTAP is taking the lead and has approached Iowa Chapter

of the American Public Works association with this idea, they are very supported with this and are going to include this in their spring meeting in March.

## **7. Annual calendar, Board Membership, Annual Plan Review**

Vanessa stated the annual calendar is out with the dates for the meetings for the next four years and is posted on the IHRB website.

Board Membership:

Members leaving the IHRB December 31: Mike Kennerly (DOT), Doug Miller (County), Larry Roehl (County), Paul Assman (County).

New Regular Members: Chris Poole (DOT), Lee Bjerke (County), Jacob Thorius (County), Scott Rinehart (County).

New Alternate Members: Khyle Clute (DOT), Joel Fantz (County), Andre McGuire (County), Paul Assman (County).

Annual Plan Review: Vanessa has asked Board members to please review our business plan. If there is anything that needs to be changed in the way we do business with the IHRB or any updates, please send those to Vanessa

One of the things that is in the plan is innovation proposal, right now InTrans is still working on reviewing the last call we did a couple months ago, when we had MT funding matched. I think we have it narrowed down to six so hopefully by February we will have those awarded.

If the board members think there is something else that we can do to either spur that call for innovation or to try to fund more basic research innovative type projects, she would welcome that feedback.

## **8. Additional continuation Project Requests**

Vanessa stated last meeting the Iowa Research Board prioritized the projects for continuation requests. The list provided to the board showed the current ranking of priority. Vanessa asked if the Board would like to reprioritize the three new projects into the list.

Kevin Jones requested to go ahead with the project TR-639 since it is time sensitive.

Wade requested to review the Project requests again between now and March and re-visit this topic later. Vanessa will send out project details and the online voting link again for review and add this item to the next agenda.

Motion to Approve by W. Weiss; 2nd K. Mayberry  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

## **9. New Business**

The County Research Focus Group will be February 15, 2017.

## **10. Adjourn**

Motion to Approve by K. Jones; 2nd K. Mayberry  
Motion carried with 13 Aye, 0 Nay, 0 Abstaining.

The next meeting of the Iowa Highway Research Board will be held Friday, February 24, 2017 in the East/West Materials Conference Room at the Iowa DOT. The meeting will begin promptly at 9:00 a.m.



---

**Vanessa Goetz, IHRB Secretary**